

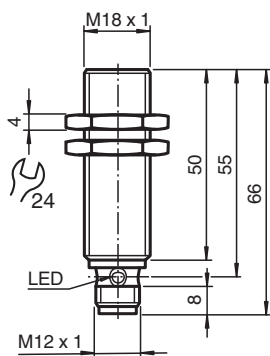


## Inductive sensor NBB5-18GS50-Z4L-V1

- 5 mm flush
- 2-wire DC sensor with minimum off-state current
- Switching status indicator, yellow LED
- Stainless steel housing



### Dimensions



### Technical Data

#### General specifications

|                            |       |                                         |
|----------------------------|-------|-----------------------------------------|
| Switching function         |       | Normally open (NO)                      |
| Output type                |       | Two-wire with minimum off-state current |
| Rated operating distance   | $s_n$ | 5 mm                                    |
| Installation               |       | flush                                   |
| Output polarity            |       | DC                                      |
| Assured operating distance | $s_a$ | 0 ... 4.05 mm                           |
| Actual operating distance  | $s_r$ | 4.5 ... 5.5 mm                          |
| Reduction factor $r_{AI}$  |       | 0.2                                     |
| Reduction factor $r_{CU}$  |       | 0.13                                    |
| Reduction factor $r_{304}$ |       | 0.62                                    |
| Output type                |       | 2-wire                                  |

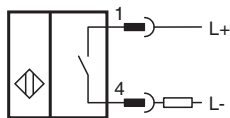
#### Nominal ratings

|                     |       |                   |
|---------------------|-------|-------------------|
| Operating voltage   | $U_B$ | 4 ... 30 V        |
| Switching frequency | $f$   | 0 ... 500 Hz      |
| Hysteresis          | $H$   | 1 ... 10 typ. 5 % |

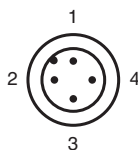
## Technical Data

|                                                 |       |                                                                                             |
|-------------------------------------------------|-------|---------------------------------------------------------------------------------------------|
| Reverse polarity protection                     |       | yes                                                                                         |
| Short-circuit protection                        |       | pulsing                                                                                     |
| Voltage drop                                    | $U_d$ | $\leq 4 \text{ V}$                                                                          |
| Operating current                               | $I_L$ | 2 ... 30 mA                                                                                 |
| Lowest operating current                        | $I_m$ | 2 mA                                                                                        |
| Off-state current                               | $I_r$ | $\leq 200 \mu\text{A}$                                                                      |
| Switching state indicator                       |       | Multihole-LED, yellow                                                                       |
| <b>Functional safety related parameters</b>     |       |                                                                                             |
| MTTF <sub>d</sub>                               |       | 1581 a                                                                                      |
| Mission Time ( $T_M$ )                          |       | 20 a                                                                                        |
| Diagnostic Coverage (DC)                        |       | 0 %                                                                                         |
| <b>Compliance with standards and directives</b> |       |                                                                                             |
| Standard conformity                             |       |                                                                                             |
| Standards                                       |       | EN 60947-5-2:2007<br>EN 60947-5-2/A1:2012<br>IEC 60947-5-2:2007<br>IEC 60947-5-2 AMD 1:2012 |
| <b>Approvals and certificates</b>               |       |                                                                                             |
| UL approval                                     |       | cULus Listed, General Purpose, Class 2 Power Source                                         |
| CCC approval                                    |       | CCC approval / marking not required for products rated $\leq 36 \text{ V}$                  |
| <b>Ambient conditions</b>                       |       |                                                                                             |
| Ambient temperature                             |       | -25 ... 70 °C (-13 ... 158 °F)                                                              |
| Storage temperature                             |       | -40 ... 85 °C (-40 ... 185 °F)                                                              |
| <b>Mechanical specifications</b>                |       |                                                                                             |
| Connection type                                 |       | Connector plug M12 x 1 , 4-pin                                                              |
| Housing material                                |       | Stainless steel 1.4305 / AISI 303                                                           |
| Sensing face                                    |       | PBT                                                                                         |
| Degree of protection                            |       | IP67                                                                                        |
| Mass                                            |       | 59 g                                                                                        |
| <b>General information</b>                      |       |                                                                                             |
| Scope of delivery                               |       | 2 self locking nuts in scope of delivery                                                    |

## Connection



## Connection Assignment



Wire colors in accordance with EN 60947-5-2

|   |    |         |
|---|----|---------|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue)  |
| 4 | BK | (black) |

Accessories

|                                                                                   |                    |                                       |
|-----------------------------------------------------------------------------------|--------------------|---------------------------------------|
|  | <b>EXG-18</b>      | Quick mounting bracket with dead stop |
|  | <b>BF 18</b>       | Mounting flange, 18 mm                |
|  | <b>V1-W-2M-PUR</b> | Female cordset, M12, 4-pin, PUR cable |
|  | <b>V1-G-2M-PUR</b> | Female cordset, M12, 4-pin, PUR cable |

Release date: 2020-05-18 Date of issue: 2020-05-18 Filename: 323676-0009\_eng.pdf